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FUNDAMENTAL CONCEPTS AND METHODOLOGY OF DYNAMIC REALISM

THE recent illuminating discussions of functional psychology make it opportune to indicate some of the metaphysical counterparts of this method as embodied in that form of monism which is most appropriately termed dynamic realism. It would consume too much of the time courteously extended to me by the editor for this purpose to indicate how generally (albeit not always consciously) this tendency in philosophy has permeated recent literature, but none can deny a notable advance in this direction during the last ten years.

The extension of the term 'functional' into philosophy may be deprecated as bringing an assumption into a sphere whose chief glory it is to avoid all postulates which have not been critically examined. 'Dynamic,' as descriptive of a form of realism, seems more happy in that it agrees with the psychological idea that conscious processes are always a 'doing' but does not drag in, even by a form of popular allusion, the thought of something behind which is 'functioning.' It may be the claim of realism to escape as long as possible from preinterpretations, whether of science or of philosophy.

Accordingly, it erases from its vocabulary such words as 'matter,' 'force,' 'cause' and 'effect'; the former pair as unwarrantable philosophical postulates masquerading as scientific facts, and the latter pair as scientific generalizations transported non-critically into the citadel of philosophy, where, breaking from their wooden horse, they traitorously betray their too hospitable host. Since science herself is pretty generally admitting the necessity of a reinterpretation of the matter idea, we need do no more than baldly state the dynamic position that matter is a revelation of energy in complex equilibrated form, and that the attribute of materiality is a name for certain relations, or correlations, of psychic modes, and so is a creation of judgment in the same sense that *substance* is. There is found neither philosophical justification nor scientific advantage in

postulating a matter behind these phenomenal centers to serve, as it were, as a precipitant for energy or a vehicle for its expression—a thing whose properties, by which it alone can be conceived to exist, are simply expressions of something else, viz., energy; which, however, can not exist without this unknowable. The logical hocus pocus involved deserves to be scourged out of philosophy as well as out of science.

But perhaps all that can here be attempted is to indicate some of the limitations which the dynamic method finds it necessary to impose.

Methodological Aphorisms of Dynamic Realism

I. It demands the closest adherence to the direct data of experience. As a point of departure, all realism endeavors to imitate common sense, though it must avoid the naïve errors of popular conceptions. It is open to us either to select as units of a system the logical elements produced by the most abstract reflection, or to take the postulates of physical sciences, but either process leaves a haunting sense of insecurity by reason of the fact, which all must recognize, that the determinants of idealism, on one hand, and the units of science, on the other, are of secondary origin, while the units really given are presented as immediate experiences. Whatever validity the elements of either materialism or idealism may have rests upon processes or assumptions based on these experiences and the truth or falsity of relations supposed to be found between them.

Realism stands between these extremes, so far as its material is concerned, but back of both by virtue of its method, which is genetic and fundamental. It begins the inquiry with the question which logically precedes all others—the inquiry as to the genesis of reality. It is idle to seek for the validity of the real till its source and nature are known.

II. Do not introduce, as a cause for an unexplained phenomenon, an element itself unexplained or depend on analogies which cross from one sphere to another and unallied one.

This aphorism is violated by materialism when it postulates an inexplicable matter back of phenomena as an explanation of their relation or coherences. If it be a fact that sound-waves will not be transmitted through a vacuum, air is stated to be the *medium* of sound. Light, however, *does* pass through a vacuum and consequently there must be some more refined kind of air in the vacuum to account for the transmission of the light. Along such lines and by such reasoning we reach a conclusion that all forms of energy require a medium for their transmission, the medium being other than energy, although necessary to its expression. The

curious series of logical fallacies concealed here it is unnecessary to discuss in detail. Energy-not-acting is a nonsense concept. If energy be limited in its expression by something not energy, we have two antagonistic things, yet mutually necessary to each other, and a dual universe, *i. e.*, energy, which can not exist without matter, and matter only revealed by energy.

The energic conception, which considers creation but a self-limitation of spontaneous energy, does not go out of its own category for the ground of *mode.* It does not require an explanation that light may pass through unfilled space but, if it be proved, as it some day doubtless will be, that something must exist in space in order that light may pass through it *as light,* the something will be identified in terms of energy, just as the action of air, etc., on the original energy of sound, forming the determinant of its special mode, is so identified in last analysis.

III. Definitions of terms must be sufficiently close to prevent the introduction of ambiguity by the application of the same term to diverse elements in the same discussion.

To the violation of this maxim, though it be simply the statement of a self-evident truth, most of our philosophical disagreements may be attributed. It is not alone the difficulty (which must be admitted to be inherent in the conditions and unavoidable) that different schools use the same word in different senses, but the fundamental incongruity of using the same word uncritically in one and the same discussion, which is here alluded to. It may be that Wolff taught philosophy to speak German, but certainly we await with impatience the genius who shall induct the heavenly muse into the mysteries of the English tongue.

For the purposes of the present discussion the closer definition of a small group of terms may be attempted, in the hope that, even if others do not care to employ the same restrictions, at least what is meant in the present connection may be ascertainable. The laxity in the use of such words as 'real,' 'true,' 'actual' and 'valid' makes it all but impossible to follow recent epistemological discussions.

Our usage shall be as uniformly as possible as follows: Wherever a general term is required for the idea of agreement with the requirements of thought, of whatever kind, we use *'valid'* or *'validity.'* A question of the criterion or sphere of validity is not implied. *'Reality'* refers to that species of validity whose ground is immediate experience and which, by virtue of its implication of a participation of the subject, is inscrutable and undeniable. It is a form of validity that can be neither challenged nor explained. To challenge it is to deny self—the ground of all knowledge, to explain, is to suppose a thinker behind the thinking or set over

against his thought, and this leads to an endless series devoid of significance.

Truth is the validity predicated of relations discovered between modes of experience. It implies but does not create reality and a relation may be true but not real. True relations become '*actual*' by their participation in the real. The statement that the sun was shining yesterday and will shine to-morrow, is true, but the other sentence, the sun is now shining, implies a present experience of reality. The judgment may be erroneous—it may not be the sun which is shining—but real experience is present.

Validity, in its widest sense, is the expression of faith that God is not mocked, but that there is a teleological universe or organism. This is prerequisite to all thinking.

If we speak of the validity of reality this can not be a question of reality itself as a direct fiat of our being, but simply a seeking for theoretical justification of the primacy which we *must* accord to it. This justification is, as already hinted, solely the law of congruousness—a faith in the unity and organic nexus of all things. The element of validity, when applied to the complicated processes of thought, consists in the recognition of relations. The statement 'That is a dog,' may prove to be founded on false relations or an incomplete assemblage of elements in a group. Whatever reality the presentation had is something apart from this identification upon which truth of the concept depends. If it be an *actual* dog, these elements of reality must be present.

Other contrasted terms requiring definition in this connection are 'existence' and 'manifestation.' Existence brings into the realm of validity the idea of continuance. We can not avoid the belief that the permanence which our judgment creates from frequent repetition of identical experiences resides in temporal extension of attributes as well as their coherence in an object. On the other hand, 'manifestation' implies an observer and is existence from the standpoint of the percipient. Dynamically considered, existence is a doing, and, in a universe of energic limitation, the doing of any particular thing implies an influencing of that universe—a reaction with other energic modes. Viewed from one point of view we might say that a thing would exist independently of the percipient, but in a world endowed (even partially and potentially) with sentient receptivity such activity will be potentially perceived. We may ignore the thought of the reaction while considering action, but this does not deny the reaction. As reacting it is potentially perceived —it has put forth what manifests it. This is then the relation of *essence* and *attribute*. Pure (unrelated) being when expressed as a definite essence owes this limitation to reaction. Attribute, or this

expression, is therefore potentially real. Its reality consists in the reaction. In the sentient world or world of realities, it is affirmed when it comes to be. To say that the essence exists prior to its attribute is to confound essence with pure being—to use an abstraction for a reality. Reality never awakens till the subject affirms the attribute. To deny that there is essence not realized is not necessary. But to claim that there is an essence not real in this sense is to limit the sphere of subjectivity unwarrantably. We must at least believe that all essence has its attributes affirmed by God. Or to put the same idea in another way, its 'becoming' is also a becoming intelligible.

To the naïve mind the analysis of being into essence and attribute seems unnecessary. There are many reasons for respecting naïve impressions. The history of grammar might lead to a suspicion as to the validity of distinctions based on the separation of verbs and subjects which belong together.

Analytically we discover that our distinction amounts merely to a separation of the subjective and objective in the consideration of a subject of consciousness. If there be an affirmation of the attribute, either the attribute affirms itself or the affirmation is made by the percipient. Obviously it must be the latter, or, if it were conceived as though the attribute affirmed itself, this would be equivalent to saying that its doing *is* its essence, for all attribute is necessarily active. (Should any one be inclined to doubt the last statement, let him reflect that even such attributes as unchangeability or inertness are only conceivable as contrasted to a world of change or a world of action, and, as activities are relative to the objects compared, it would be optional with us to say that the world is inert and unchanging and these changes inhere in our object. In fact, we know, physically speaking, that resistance and stability imply as much energy and reaction as any other attributes.)

But the affirmation is subjective and being becomes, like reality in general, the harmony of the subjective and objective.[1] But does

[1] Professor Dewey somewhere says: "The copula gives the statement of being, asserts the reality, and should not be treated as a mere representation of an act of mental predication. If it is merely subjective it contradicts itself. The judgment implies the existence of an object, and if being is simply in the mind of the person forming the judgment, the judgment is a contradiction."

The first part or premise of this summary is precisely equivalent to our 'reality is affirmation of attribute' and, if the logic is good in both cases, the result should be the same. But we rest our case on the statement that the affirmation is subjective and the attribute objective, while others say, No; the affirming (asserting) is objective, and there is appeal to common sense as well as to science to support the statement. We make bold to suggest that neither science nor common sense has made this ruling.

not the mind require us to conceive of a reality underneath the attributes in which they inhere? It is a question difficult to answer in this form. We can not trace our mental activities far enough back to ascertain by introspection what would take place in our consciousness if a single manifestation of reality should occur alone with no historical setting to build it out. It is not possible to say that the mental act of perceiving the light, or pain, or organic subsensation, which constitutes our affirmation of that fact, would be accompanied by an appreciation, even in the vaguest form, of an essence of which the sensation should be the attribute. In fact, all that we can gather, by the indirections permitted us, is in the direction of evidence that facts of somatic experience affect consciousness in infancy without our recognizing them as attributes of any essence. Yes, we *feel* them, but we do not *know* them. True, when we begin to know, the separation of essence and attribute is effected, but essence is not 'essence' simply, but a something else which we call 'substance.' The idea of substance is other and more than that of essence, which latter is a metaphysical creation that, as such, is not an element of our knowledge.

Substance is not only that which 'stands under' and forms a foundation for attributes, but is that which subsists from moment to moment in our apprehension of these attributes. Substance is a product of the integrating faculty of the mind. When the same experience repeats itself, either alone or in constant relation to others, these repetitions are, by this apperceptive power, piled one upon the other, their individuality is lost, and the uniformity and identity give rise to the judgment of a substance continuing and underlying the repeated similar or identical experiences. The

But, first of all, as to reality. Whose reality? It must surely be the reality of the realizer, not, as Dewey seems to imply, a reality of the on-looker or philosopher. Real implies the act of *realizing*, if we are to remain true to a dynamic position. So also subjective and objective are relative terms here. Subjective to whom? Why, of course, to the realizer. Now if we make any distinction between essence and attribute (which common sense does not, so that it need not be appealed to here) the affirming is done by *me*, it is subjective if anything is. What actually happens might better be represented by 'Lo, light.' If the question of reality arises, the change is to 'Light is.' 'Yea, verily light.' The light sensation has coupled itself to *me*. 'I affirm (there is) light.' To which of these terms does the distinction of objectivity come to attach? To the affirming? Certainly not, but to light.

But at this point logic is prone to outrun experience and to attempt to confound simple apprehension with judgment of substance. It also confuses what is *true* with what is *real*. The predicates of truth and reality are not discriminated in common parlance but must be in philosophy. Truth is predicated of relationships while reality does not exist apart from the experience of it. My experience is real or non-existent, my judgments are true or false.

greater the number of experiences and the greater the range of their variety that can be brought into constant relations, the greater the security we have in our concept of substance. An object that we can see and feel and hear and smell and taste in such relations of constancy as suggest organic connection between these various sensations, produces in us a sense of substantiality that is more impregnable than that which results from a fleeting glimpse. Yet a rainbow is presented to sense in as substantial a way as the distant mountain on which it seems to rest, and the sense of substantiality is undermined only by the final discovery that the perceived relations are false. The appearance is real but the predicate of substantiality is erroneously placed. The substance exists, but is not where and what we supposed.

It may be objected that substance is framed to connote certain uniformities in experience and thus is a result of the impossibility of keeping separate impressions which are exactly alike in a mechanism like the brain. Well, what of it? Our mental furnishing is formed of uniformities variously classified, and the classification depends on the classifying organ and not the external relations only. The judgment of substance is formed so early and takes such hold on our mental life that we may claim that it is innate, or rather that the necessity for it is structurally innate, and that whatever value such classification may have to life will be propagated through natural selection.

There is then a reality back of the attribute—not exactly, but back of the uniformity in attributes psychology gives us substance, and it remains for philosophy to postulate essence if she can prove a necessity for it.

We hold this distinction to be most important, viz., that the material out of which the mind forms its objective units is not properties or activities, as such, but coincidences, uniformities, repetitions and the like. A process of identification and correlative differentiation is necessary to all of the classificatory work of the intellect. All changes reflected upon our minds become properties or attributes of some substance as soon as we observe or infer a uniformity in their repetition, relation, etc. We might even speculate upon the reason for the outward projection of this new validity —a reality of identification, or truth.

Lotze's definition of being (essence) as the 'standing in relations' involves part of the idea expressed above but it is somewhat awkwardly put. If the thing is defined by the relations in which it stands, these relations can only be perceived of its attributes. These attributes must be activities. Relation implies change, as it could not be predicated of actual homogeneity. Relation implies ex-

perience of change, yet it is uniformity in the midst of change that produces the judgment of substance. Again, to stand in relation has no significance unless the relation be perceived. Standing in relation is no different from standing out of relation till the relation is perceived. Thus we are driven to our first conclusion that in reality we have attribute and the affirmation of it by the percipient. The latter, or essence, is subjective and the reality is the union of subjective and objective.

But for all practical purposes, we may be satisfied with the result of analysis. We know that an experience is real and are indifferent whether philosophy recognizes the criterion of validity or not.

C. L. HERRICK.

SOCORRO, NEW MEXICO.

HERBERT SPENCER AS A PHILOSOPHER[1]

IT is probably too soon to speak with confidence of Mr. Spencer's services to philosophy. The enthusiasm which greeted his philosophy more than a generation ago has waned under the growing conviction of looseness and inconsequence, and the result is that in recent years his genuine service to philosophy—and to science—has not been adequately recognized. What I shall say of him is that he introduced into science and philosophy a method which has resulted in a greater advance of thought than any since the beginning of modern science, but that his own use of this method was often superficial, and that his type of mind was in many respects distinctly unphilosophical.

He was unphilosophical in the sense that he was uncritical. His cast of mind was that of a blind empiricist. He was one of those who hold that knowledge is to be found simply by opening your eyes, that disagreement and error must be due either to negligence in observation or to blind prejudice. He sets out with the assertion of a fixed world-order. This world-order is not merely *postulated* as a necessity of thought—as a condition which must be realized in fact if we are to have knowledge—but is asserted as a positive and realized fact—as something not to be worked out and proven, but simply to be recognized. And Mr. Spencer betrays the *naïveté* of his assumption in his impatience with those who are slow to recognize—who fail to see the plain fact of universal causation. If he had examined his position he must have asked—as Kant had asked long before—whether this recognition of universal causation was not in

[1] Read at a meeting of the Texas Academy of Science, held in memory of Mr. Spencer, at the University of Texas, March 24, 1904.

itself of the nature of a prejudice. And if he had critically sifted his facts he must have seen that merely by themselves they presented no clear order, and that the order found in them was obtained by a process of selection, which, in a complexity of detail unmanageable as a whole, had emphasized the small part that could be actually ordered, and had ignored the rest, merely trusting that these too could be reduced to the same order. This ordering process had long before been pointed out and, in his derivation of the conception of cause, Mr. Spencer was, I believe, the first to offer a theory of its genesis. But his theory of the genesis of the causal order presupposed that the causal order was first a fact. Indeed, though the derivative character of other evolved conceptions led him to a criticism of their validity, it was never so in the case of causation. He remains throughout within the point of view which regards the causal order as a plain fact—as something not to be interpreted or proven, but merely to be recognized.

Mr. Spencer's type of mind was one that admitted of nothing but definite certainties. Though no one has done more than he to establish the view that all distinctions in the world are relative and all differences gradual, yet in practice his facts were all absolute. Everything real was perfectly clear, and anything not perfectly clear was wholly unreal and deserved no consideration whatever. There was with him no broad boundary of doubt, as with most of us, between the real and the unreal—or, rather, I should say, no series of imperceptible gradations between clearest reality and absolute negation. His real world was like that of the ancient geographers; there was a definite end to it, and when the end was reached there was a sudden fall into nothingness. No feature of his philosophy illustrates this better than his unknowable. To many readers the unknowable is a generous concession to the possibility that what is not known clearly may still be known to a degree and apprehended as real, and many theologians have sought to discover in the unknowable a possibility of sympathy with their own views. But from Mr. Spencer's practice it must be evident that the unknowable is a matter of logical courtesy and nothing more. After fixing the limits of the knowable with a precision that implies a good deal of information about the unknowable, the latter does not again enter seriously into his system of philosophy. His statements about the knowable are as positive and final as if there were no unknowable waiting to give them a new interpretation.

I have intimated that Mr. Spencer's hard facts were in reality the reflection of a personal point of view. Now this point of view, so far from being philosophical, was nothing more than the point of view of the plain man. Mr. Spencer was a plain man of the hard-

headed type—one who, indeed, was beyond the range of popular superstition, but who, on the other hand, accepted the laws of natural science with unquestioning reverence. This does not mean, of course, that a philosopher should not accept these laws, but merely that, as a philosopher, he should accept them as hypotheses, with a regard to their possible modification in a more general view of things. For Mr. Spencer, however, they were final and absolute verities. In his appeal from the reasonings of metaphysicians to the facts of science he was evidently unconscious of the metaphysics implied in the definition and demonstration of the facts; he forgot how often the laws of science had been reconstructed upon a modified basis, and he overlooked the probability, amounting almost to certainty, that what is now systematic and clear will in its turn be recognized as inconsistent and obscure and call again for redefinition. In fact, it is a curious paradox that Mr. Spencer's evolutionary philosophy made no provision for the further evolution of scientific conceptions or for the evolution of his own thought. Throughout a long life spent in the elaboration of a system of philosophy he retained unaltered the principles and even the prejudices with which he began. His native desire for and belief in individual independence suffered no modification through his later conception of society as a social organism. So also the physical conceptions accepted in his earlier works were greatly modified by physicists during his lifetime, and the modification was due partly, though indirectly, to the influence of his own writings. But in his own thought they were never modified. The point of view of the evolutionary works simply overlaid that of the 'Social Statics,' and the result is an evolutionary philosophy in which evolution is logically a mere appearance, in which the final realities—matter and force—remain just what they were from the beginning.

It is this standpoint of the plain man which accounts for the attention universally given to his philosophy and for the popular admiration of its simplicity and clearness. For even Mr. Spencer's opponents have been accustomed to admit that, in marked contrast to all other philosophies, his was at any rate simple and clear. In reality, however, there is no writer who illustrates so well how illusory clearness may be and how often it depends upon an unconscious similarity in the standpoints of writer and reader. Mr. Spencer was clear for those who shared with him the point of view of the plain man, and to whom no questions were suggested for which he did not provide. The moment we go outside of his point of view and attempt to consider his theories in relation to those of others, to determine just where he stands and just how he answers the main question at issue, we find ourselves in confusion; he is commonly, without sus-

pecting it, on all sides at once. We may then be able to see that there is a really organic and consistent view underlying his several statements, but to state it as his real view we shall have to modify many of his statements and to reject others as not properly expressing his meaning. This, at least, has been my own experience; and to those who wish to make a test of his clearness I recommend his views of heredity, of the association of ideas, and of the relations of egoism and altruism.

The outcome of Mr. Spencer's way of thinking is a system of philosophy which has the appearance of being carefully constructed upon a solid scientific foundation, but which is in reality full of superficial reasoning. This superficiality consists largely in the uncritical use of scientific metaphor. I say 'scientific' metaphor because Mr. Spencer, instead of taking his figures from common life, took them from physical science. He then proceeded to apply them by analogy to a wide range of phenomena without taking into account the difference between the phenomena thus defined and the original figure. The final result is an argument which is often hardly superior in quality to that of Henry Drummond's 'Natural Law in the Spiritual World.' To choose a glaring but not unrepresentative illustration, take his chapter in the 'First Principles' on 'The Rhythm of Motion.' Here Mr. Spencer undertakes to show that the law of rhythm is true not only of the vibrations of a string or of a tuning-fork, but of every change in the universe, including the changes of the weather, the appearance and extinction of animal species, the rise and fall of nations, and the fluctuations of mood and attention in the individual. Until we ask what is meant by rhythm this is all deeply significant. But upon asking this question our attention is called to the fact that by 'rhythm' we mean not only recurrent alternation of action and reaction, but periodic alternation —that is to say, action and reaction which repeats itself in equal intervals of time. But Mr. Spencer, after his first few instances, ignores the necessity of periodicity. He can not pretend to show that the alternations observable in our mental conditions, in society or (leaving out the annual changes) even in the weather, are periodically recurrent. What is the result? Either, we must say, his general law of rhythm is false or it is meaningless. It is false if he adheres strictly to the periodic nature of rhythm. It is meaningless if this is to be regarded as not essential. For, that there must be action and reaction—a departure from equilibrium, now in one direction, now in another—in a world where there is a plurality of moving bodies, or where action is not perfectly adjusted to ends, is so obvious as to be a truism. It would be remarkable if it were otherwise. If these alternations were periodic the fact of their occurrence would

be significant; in the absence of periodicity they are not worth mentioning.

I have allowed myself this criticism of Spencer because it seems to me that the severest criticism can not obscure the fact that he was a man of real genius and rendered invaluable services both to science and to philosophy. The question remains, then, regarding the nature of these services. He was not the first to conceive of biological evolution, for Lamarck and others were before him and Darwin is his contemporary;[2] nor was he the first to propose an evolutionary philosophy, for this had been done by Hegel; and for that matter, the conception of evolution may be found in the earliest Greek poetry. Mr. Spencer's real services to thought may, I think, be brought under the following heads:

In the first place, though he was not the originator of the conception of evolution, he was the first to make it a universal and effective working-hypothesis. Darwin had applied the conception only to animal life. The Hegelian evolution was the evolution of the idea —a logical order of derivation rather than the real order. The Hegelian meant, to be sure, that the logical order was in fact the real order, but his language and ideas were so far from those of common life, and indeed the concrete significance of his conceptions was so imperfectly appreciated by himself, that it is only in the light of Mr. Spencer's work that we call the Hegelian philosophy a philosophy of evolution. What Mr. Spencer did was not merely to convert a biological conception into an hypothesis for science in general, nor yet merely to *propose* it as a general working-hypothesis, but, by taking upon himself the labor of applying the conception to fact and detail, to show that it was clearly workable. Upon the results of his work it is unnecessary to enlarge. To the introduction of the evolutionary conception we owe not only a wide extension of practically every science, but the opening to systematic investigation of many fields which hitherto had been capable only of somewhat unordered description.

In the second place, through Mr. Spencer's work we have arrived at a more truly cosmic philosophy. By this I mean that we have been brought more clearly to the conviction that the world is a unitary system, and that every fact in the world derives its character and meaning from its place in the system as a whole. This was, of course, not a new conception. That all the different features of the world must be in some sense interdependent has been recognized

[2] For Mr. Spencer's place in the development of evolutionary theory see the preface to the fourth edition of the 'First Principles'; also Huxley's chapter "On the Reception of the 'Origin of Species,'" contributed to Darwin's 'Life and Letters.'

from earliest times, with more or less clearness, as the postulate of all philosophy. Mr. Spencer's service consisted—here again—in working out the conception in terms of fact and detail, and in making it a practical rule of thought. To give two instances: it is to him that we chiefly owe the acceptance of a universal interdependence of mind and brain as a working-hypothesis for psychology; and he was the first, I believe, to insist upon a physical and biological interpretation of human conduct. These were, indeed, the consequences of the conception of animal evolution. While human beings were regarded as a unique animal species, sharply differentiated from the beasts by the fact of moral sense and reason, there was no ground for treating human thought and action in the light of more general laws. It was Mr. Spencer by whom, in these regions, the consequences of evolution were enforced; so that it is now an all but universally accepted principle that there is nothing in the higher stages of evolution which is not in some form present in the lower, and nothing in the lower which does not in some form persist in the higher. The introduction of this principle into philosophical studies has made them not only more coherently and comprehensively philosophical, but at the same time more definite and concrete. The older moralist, for example, in his search for the end of human conduct, was limited to the facts of human life, and the range of possible interpretations was indefinitely large. When now he assumes that the same principle of action which governs human life must also be applied to that of the lower animals, the field of discussion is immensely narrowed and the problem is much more clearly defined. The same is true of the psychologist. Professor James has made an analysis of emotion which so far surpasses all others as to be the first really concrete description. But this analysis would never have been suggested except for the hypothesis that in human life we have only a later development of the impulses which govern the lower animals.

WARNER FITE.

UNIVERSITY OF TEXAS.

DISCUSSION

TWO RECENT VIEWS OF THE PROBLEM OF REALISM

IN the fifth number of this JOURNAL Doctor Hartley Burr Alexander published an article entitled 'The Concept of Consciousness,' in which, if I understand him correctly, he attempted to disprove the ordinary psychophysical view of consciousness, so far as its relevancy for metaphysics is concerned, and to suggest in its

place a doctrine which might be called naïve or positivistic realism. Doctor Alexander's argument is interesting in itself, and is still more interesting when considered in relation to the theory of Professor C. A. Strong as set forth in his recent book 'Why the Mind has a Body.' For while Professor Strong tries to establish idealism on a psychophysical basis, Doctor Alexander would build up a realistic doctrine on a non-psychophysical basis. There is thus a double contrast between the two views. To limit the scope of immediate or direct perception to the states of the psychophysical organism seems to Doctor Alexander absurd, and to Professor Strong axiomatic. And again, to regard the sensible qualities and physical objects which we directly experience as constituent elements of reality seems to Doctor Alexander quite natural and necessary, while for Professor Strong, on the other hand, those same objects and qualities are viewed as the hopelessly phenomenal states of a set of transcendent (*i. e.*, unperceivable), though quasi-conscious, things-in-themselves.

The dual antithesis of these views is complete and instructive, but in itself it concerns us only as an incident. The main purpose of this paper is to point out the similarity of the two conceptions. I wish to show that the naïve realism of Doctor Alexander and the psychological idealism of Professor Strong both follow from a single false disjunctive judgment, an imperfect dilemma which they both accept as true, though each selects an opposite horn. This supposed dilemma is as follows: *The qualitative contents of our direct or immediate consciousness are either exclusively outside or exclusively inside the psychophysical organism.*

Let us begin by considering the arguments offered by Doctor Alexander in support of the first or realistic alternative. That writer says:[1] "Useful as the psychologist's position may be as a *modus operandi* in his own science, it can only result in irrationality when carried over into metaphysics. . . . We can have immediate experience only of sensations, he says; they furnish all that we know really and at first hand; the apparatus of sense is the proof, . . . *ergo* we can know nothing but conscious states and everything must be consciousness. The amazing thing about this argument is that anyone could fail to see that it is based upon the tacit assumption of knowledge of that very extra-conscious world the possible existence of which it is so strenuous to deny." In short, an idealism which is based upon physiology is self-contradictory. We could not infer the physical unless we experienced the physical, hence if there

[1] THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS, March 3, 1904, p. 119.

is a physical world it must be formed out of the stuff which we directly perceive. This is the positive part of Doctor Alexander's thesis, and it seems to us that he has proved it most satisfactorily.

With the second part of his thesis Doctor Alexander is by no means so successful. Not content with proving the objective reality of experienced *qualities,* he proceeds to attack the psychophysical conception of consciousness and to prove that the *particular things* which we experience are not events within the organism. "The common-sense view of consciousness is distinctively from the third person's standpoint. . . . We learn in our physiologies that the brain is the 'seat' of consciousness, and taking this figure to mean that the mind is somehow enclosed within the brain, we accept the solution as sufficient to our need . . . it never occurs to us to question the premise that consciousness is confined within the skull. . . . The view of consciousness current in the psychologies is not very different from that of common sense. . . . Useful as the psychologist's position may be as a *modus operandi* in his own science, it can only result in irrationality when carried over into metaphysics" (pp. 118–119). This view which Doctor Alexander thus describes and condemns as the third person's standpoint, he contrasts with the unreflective feeling of all of us, that in perception we are directly grasping extra-organic objects which are distant from us in time and space. And he accepts this latter naïve and telepathic view of perception first because it is acceptable to naïve consciousness, and second because it is free from the difficulties of subjective idealism and of parallelism, which he conceives as the only alternatives. With regard to the second of these reasons, I hope to show, after considering Professor Strong's view, that Doctor Alexander is wrong in supposing that his telepathic theory of perception is the only alternative to psychological idealism. While, as regards the former of the two arguments, I would call attention to three sets of considerations, anyone of which would justify sufficiently the psychophysical theory of perception against the testimony of naïve consciousness invoked by Doctor Alexander.

First, then, I mention the *a priori* argument against any object affecting directly any thing except what is contiguous to it. If a thing is real it is somewhere. If I am real I am somewhere; to be real I must have a position or place in *rerum natura.* How can I conceive a thing that is at a distance from me making itself known to me, causing in me a perception of it, without projecting itself through the intervening space in the form of an effect upon my organism? If I do not perceive the effects of the fixed stars upon my organism, if I perceive the real stars themselves, remaining all the while here upon the earth, I and they must interact at a dis-

tance, *i, e.,* must be in two places at once which seems to me impossible.

Secondly, if I would escape the contradiction involved in discontinuous influence, or action at a distance, and yet maintain that I perceive objects themselves and not the projections of them on my organism, I must hold that in sight for example, my visual organism is actually as large as my field of view, that when I see a star my consciousness actually rushes out through my eyes and encircles the trillion mile distance that separates me from the star. This is, I suppose, the naïve or unreflective view of the perception of distant objects, that they remain where they are but yet are immediately present to our organs of sight which are thought of as two enormous but impalpable antennae extending far beyond our tactile members. Now this view, aside from its absurdity, can be easily shown to be false because of the element of *time* that is always involved in our perception of objects outside us in space. The astronomer may give us excellent reasons for believing that the star, which we thought we directly perceived, had perished several years previous to the time when we were looking at it. Every stimulus that we know of takes time to affect us, hence if we would justify the naïve belief in the direct perception of happenings at a distance, we must extend our telepathic power to time as well as space. And this would I should suppose be regarded by everybody as frankly impossible.

But thirdly, all the facts of *illusion* constitute in and by themselves an independent refutation of the telepathic view of Doctor Alexander. For an illusion is a case in which there is produced in the organism by some internal cause an effect of the same sort as is usually produced by an external cause. The object perceived is the same in the true and in the illusive perception. The extra-organic circumstance is different hence it follows that it can only be the projection of an event on the organism that is the object of a direct perception.

That naïve consciousness shold normally neglect the personal equation is as natural as that a man should forget that he is wearing glasses. As long as the glass remains undimmed, and does not distort our view, we do right to neglect it. As long as the psychophysical mechanism works efficiently, we rightly and inevitably take no account of it, and it is only when something unusual, such as an illusion, makes it go wrong that we are rudely reminded that in sense perception we have to do not with external objects but with the shadows which they cast upon our organism. Doctor Alexander does to be sure make casual reference to some of these things, but seems to feel that for some reason we are at liberty to relegate them

all to the 'special science of the psychologist' and construct a 'metaphysics' of perception on a grandly independent basis. He reminds us that "it has long been plain that the tack followed along the line of the physiological argument results in a sorry course and a loss of wind for all the types of thought involved" (p. 120). We must, however, remember that the invalidity of that part of Doctor Alexander's thesis which deals with perception does not in any way affect this demonstration of the extra-organic *reality* of those qualities which we *perceive* only when they are within the organism.

Now turning from the extreme realism of Doctor Alexander to the psychophysical idealism of Professor Strong, we find that while the first part of his book is a fine vindication of the physiological method of approaching metaphysical problems, yet his second thesis, asserting the exclusively subjective and phenomenal nature of sensible qualities and the correspondingly transcendent and mysterious nature of the real things is by no means so convincing. The chief reasons given by Professor Strong for rejecting the reality of sensible qualities seem to be: I., that the primary qualities can not be conceived apart from the secondary qualities, and that the secondary qualities are intrinsically subjective in their nature and not merely in their exemplification (p. 177); II., that it would be duplicating worlds *præter necessitatem* to believe that the sensible qualities were exemplified both within and without the mind (p. 178); III., that we can not imagine ourselves completely away from objects without their vanishing in our grasp (p. 183).

We may begin with the last argument which appears to us the weakest of the three. It is true that whenever I think of anything, there exists along with the thing thought of my present act of thinking about it, but this either has no significance at all, for the reason that I can perceive my act of thinking to be extrinsically and, therefore, unessentially associated with its object and something to which I can pay more or less attention without the object changing at all, or else it means that I here and now can think of nothing at all as having reality or meaning of any kind that is not a part of my own consciousness at this present moment. Not only the physical world but Socrates, my great grandparents, my own past and future existence, are all nothing but aspects of my present psychosis. No one, and certainly no believer in things-in-themselves, could accept the extreme solipsism which this argument would mean, if it meant anything.

The second argument, which asserts that it would be multiplying essences needlessly to suppose that the external world resembled its intra-organic projection or shadow, flies so directly in the face of all analogies of experience that the realist always feels dumb-

founded when he finds it recurring. If there is one thing more obvious than another in the experienced world, it is the depiction or imitation of one thing by another. The effect to be sure is by no means invariably similar to its cause, yet on every hand we find cases in which there is resemblance, and do we then say that forms are being multiplied beyond necessity? Because I see sky and stars reflected in a mountain lake must I hold that the real sky and stars which cause that reflection are totally unlike the reflection, on pain of multiplying essences *præter necessitatem?* Is a photograph necessarily unlike the original lineaments that are its cause? Whether *præter necessitatem* or not, it is the very nature of qualities to *exist in multiplicate.* Every object projects upon every other object its form or image in as many ways as there are modes of energy, and the projected effect, while it is never perfectly like the cause, is also never totally unlike it. Surely we need not suppose that there is any peculiar distortion of perspective in the case of organisms. It seems to be the main business of an organism to correspond in its sensory affections with the environing objects which cause them. Indeed the differences of the animate and inanimate are largely due to the infinitely greater depictive power of the former. For whereas the dead thing reflects only the present moment (the past producing only a general resultant effect), the live thing on the other hand carries in its present state the *detail* of its own past history and to some degree that of its ancestors, its place in the scale of development being correlated precisely with the degree to which its depicted past is effective in modifying its reactions to present stimuli. Does not this increased *extent* of depictive power in living things carry with it a presumption of increase rather than decrease in the *accuracy* of depiction?

The argument that remains to be considered is stronger than either of the others. If the primary qualities can not be conceived without the secondary qualities and if the secondary necessarily imply a conscious spectator, then indeed there would seem no refuge from idealism. I would answer (1) that the inability to imagine is confused with the inability to conceive. I can conceive of the fourth dimension and of a sixth sense, and might even believe in the existence of those things, just as a man blind from birth conceives of and believes in a world of colors, without being in the least able to imagine them. Hence I can conceive of a temporal and tridimensional order of relations the intrinsic nature or 'secondary qualities' of whose terms remain quite unknown. But (2) it is, after all, by no means certain that the secondary qualities can not be imagined as objective. The exclusively subjective nature of these contents has been accepted as a self-evident dogma for so long that

it never occurs to us to inquire into the very slender basis on which that dogma rests. The era of modern as distinct from medieval thought began with the realization that natural objects were determined *ab extra* to a greater extent than by their own natures. The spatio-temporal relations of a material body govern its behavior, and a knowledge of external, mechanical or quantitative relations gives us the modern or predictive science as opposed to the merely classificatory science of the middle ages, which was always based upon a study of the intrinsic or qualitative rather than the extrinsic or quantitative aspect of things. Now, the secondary qualities are only indirectly correlated with the finite or perceptible spatio-temporal relations and hence they are for predictive or mechanical science of no direct value. For that reason they have been thrown bodily over into the realm of the subjective, and regarded as having their *esse* in their *percipi*. The uselessness of the secondary qualities for purposes of prediction combined with the fact that they are more regularly and markedly associated with feelings of pleasure and pain and hence are somewhat less easy to disentangle from our admittedly subjective processes, than are the primary qualities, is the sole ground (and a very inadequate ground it is) for our modern dogma that the objective world, in so far as it is objective, must be denuded of all colors, sound, odors, etc., and regarded (materialistically), as a mere ghostly nexus of spatio-temporal relations, or else (panpsychically) as a world of transcendent minds for the existence of which there is no shadow of normal or analogical evidence, and for a proof of which we are obliged to appeal to a 'pre-rational instinct.' Restore the ancient right of the secondary qualities to exist apart from the peculiar structure which we call a psychosis or a consciousness, and we take away the main support of idealism either in its Berkeleyan or in in its panpsychistic form. For though Professor Strong may be right in assuming that the primary qualities could not merely of themselves subsist apart from some perceiver, yet when reinforced by the secondary qualities they can and do constitute an intelligible world of physical objects which neither precludes nor requires the presence of conscious spectators.

I can not feel that either naïve realism or psychological idealism would win their numerous adherents, were it not for the secret conviction of each school that its own position is the only refuge from the position of its rival. The naïve realist, for example, would never be tempted to fly in the face of commonplace pschological and physiological truths, and maintain a telepathic theory of perception, were he not oppressed with the fear that if a perceived object were once exemplified within the organism, it could not be exemplified

outside as well. Nor would the psychological idealist have any adequate motive to degrade the objective world to the status of a parasite of the percipient ego were he not oppressed with the fear that if he admitted the independent reality of objects in space he would have to ascribe to himself a telepathic power of perception.

These groundless fears are largely due to the distorted form in which, from the time of Descartes, the dualistic theory of knowledge has been presented. The intra-mental and the extra-mental objects are not different in kind as the Cartesians supposed, but rather as Aristotle and the scholastics maintained, they differ only in position and in relational context. Objects of perception—even the so-called 'particulars'—are always qualities or combinations of qualities, forms, *universals.* As universals they are capable of multiple exemplification—capable of existing in two places at once. We can never perceive a quality except it be exemplified in our psychophysical organism, for we are not telepathic; but this does not prevent us from perceiving directly the intimate stuff of objective reality itself; because a content such as red or green is exemplified in us, and so seen by us, it does not follow that its nature is made by us, that it is dependent upon us as an *exclusively* subjective thing. Perceptual knowledge is certainly objective when regarded *formaliter,* it is certainly subjective when regarded *materialiter.* The naïve realist recognising the formal transcendency of perception, thinks it necesary to make perception also materially transcendent. In disregard of the facts of psychology, he would make each particular mind as large as its field of reference. The psychological idealist, on the other hand, knowing that knowledge is materially limited to what appears within the organism would make it equally limited in its formal scope. In disregard of the needs of logic, he would restrict the extent of objective reality to the spheres of individual minds.

Between these views it is difficult to choose, though in favor of each it may be said that it is capable of refuting the other. Both arguments rest on a false dilemma. Forgetting the important Platonic and Aristotelian truth that any object of cognition is primarily and essentially a universal, and is as such capable of simultaneously existing both within and with out the mind, they assume that a perceived object must exist *either* in one realm *or* in another—that if it is externally real (as Doctor Alexander rightly asserts), it is *thereby* prevented from being presented within the psychophysical organism (which he wrongly infers); or that if, as directly perceived, it exists within the psychophysical organism (as Professor Strong rightly asserts), it is *thereby* prevented from being real (which he wrongly infers).

W. P. MONTAGUE.
COLUMBIA UNIVERSITY.

REVIEWS AND ABSTRACTS OF LITERATURE

Transitional Eras in Thought. With Special Reference to the Present Age. A. C. ARMSTRONG, Ph.D., Professor of Philosophy, Wesleyan University. New York, The Macmillan Company, 1904. Pp. xi + 347. Price, $2.00.

This book discusses the so-called transitional eras in thought, eras like the Sophistic movement among the Greeks, the Renaissance, the eighteenth-century *Aufklärung*. It attempts to discover the characteristic marks of these periods and also to point out their fundamental differences, and shows that our own age resembles these epochs in many respects. Such eras of transition are, according to our author, times of tearing down and clearing away, times of digging about the foundations of belief and action, eras of scepticism and agnostic thought. They are not periods of growth so much as periods of the decay on which growth is consequent, and therefore betray many symptoms of decadence.

One of the earliest characteristics of such times is the breaking up of philosophical systems, and this decline of philosophy is a condition of the coming of the change in all. The movement likewise involves religion and theology as well as the principles of morals. The weakening of the regulative principles produced by the confusion in reflective thought, and the enfeeblement of conscience and the moral will, bring about revolutionary changes and disasters. The causes of the disease must be looked for in the region of the ethical as well as in the sphere of the intellectual development, and thought and action must cooperate to effect a cure.

The phenomena involved in transition periods are very complex, and it is not to be supposed that any one element in the total process is exclusively cause and effect. Moreover, the forces at work are not to be found in thought alone, but in the intimate alliance of thought and life.

Every era of transition must pass away. The earliest indication of its decline is the appearance of dissatisfaction with the results of unbelief in theory and in practice. The work of reconstruction often begins with the heart. Men turn to the feelings and the conscience, they recoil from the philosophy of reason to the philosophy of faith or the philosophy of feeling, of instinct, of the heart. This faith philosophy accomplishes a useful work by bringing into prominence the inherent presumptions in favor of spiritual principles.

The specific differences between the various eras of transition are also noted by the author. The development of national culture, the extent of scientific attainment, the stage of political organization, the progress of social development, the character and purity of ethical conceptions, the nature and the intensity of religious convictions—these factors in thought join with temperament and environment and history to make Sophism different from the post-Aristotelian scepticism, to distinguish the Renaissance and Reformation from the eighteenth century, etc. Our own age, for example, is certain of one thing, physical

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science. It is hesitant or sceptical about most things else. It is often conscious, however, of the deeper moods of the human spirit, therefore profoundly dissatisfied with the results of its own labors. Connected with this mood of spiritual discontent is the ingrained moral seriousness of the thinking of the time. This ethical spirit of recent scepticism lifts it to a nobler level than the majority of the transitional eras.

Professor Armstrong also shows how natural science, which has been counted chief among the destructive forces of our age, has come to contribute to the cause of positive truth. Though science is not without its infirmities it is the most nearly certain knowledge we possess. Science exerts a reflex influence upon thought, which is to be reckoned among its principal achievements. In the broader sense science is a real philosophy. Its method is based upon thought processes and its results lead on to principiant conclusions. Never before has mankind been in possession of so large and important a body of accepted conclusions. Science has rendered a great service in saving our age from utter moral despair. We may also say that science has helped to strengthen the foundations of morals and religion. Thus science itself has produced evidence in proof of the integral and essential position of religion in individual life and human society. Moreover, science supplies new motives for belief in God, *e. g.*, in postulating some sort of unitary ground of the world which is conceived as an active Being. The theory of biological evolution is instinct with teleological implications of its own, and it is possible in our day to defend the existence of an intelligent framer of nature.

A tendency towards historical inquiry also marks periods of intellectual unrest. The present age exhibits such tendencies, but these can not be completely explained as the result of despondency alone. The methods of historical research have been perfected in our time, and are used as an instrument of explanation, being completed in the genetic method of explanation. And the thought has been evolved that there is a universal law in history, that connections exist among the events, that there is continuity among the phases of history and the world at large. The historical spirit of our age, therefore, differs from that of other eras of transition. The prominence of biological science, particularly Darwinian researches, in the intellectual movement of the age has favored the adoption of the historical point of view. This has led to an enlargement of the field. The field of science seeks to trace out the evolution of the entire phenomenal universe from star dust up to mind and social life. It must be remembered, however, that the historico-genetic movement has not been dependent on biological thinking alone. Moreover, the complete identification of biological evolution with cosmical evolution, and the tendency to count the former the sole cause of the transition to the historical way of looking at the world, are exaggerations. Yet the historical type of reflection is no mere passing phase of thought, but a notable addition to the intellectual possessions of the race.

Still another mark of transitional eras is the effect of the new thought on political and social movements. The last century and a half has been

characterized by a remarkable development of civil liberty, the establishment of equality among the citizens of the enfranchised nations, and the consequent demand of the lower classes for relief from want or a larger share of the rewards of labor. The thinking of the time is concentrated on social questions, and the study of social problems gives prominence to organic rather than the atomistic conception of society. The social sciences have influenced psychology and ethics, both theoretical and practical. It is recognized that man has duties to the social organism of which he is a part, and to other groups or classes of men. There is also a widespread conviction that the socialistic functions of the state should be increased. Religion too is being socialized; all sects agree that it is a paramount obligation to promote the things which make for general good.

Another feature of transitional eras is the appeal to faith which is also not unknown in our own age. Faith bases its conclusions on practical rather than theoretical grounds, and it deals with principles which are incapable of demonstration. That the esthetic, the ethical, and the religious consciousness are normal and integral elements in human nature, and that thus their deliverances are evidential—principles of this kind form the real kernel of the faith philosophy. The evidence of faith may not, however, according to our author, be pleaded in behalf of principles whose character is purely theoretical, nor may it be cited in contravention of conclusions which are based on proofs of demonstrative force. Knowledge in the complete sense faith can not be. Nevertheless its testimony is of moment.

In a concluding chapter Professor Armstrong points out that eras of transition must pass away and that characteristic phenomena foretell their closing. Neither conservative reaction nor the method of doubt or denial, however, is fitted to lead thought on to a new constructive age. Such eras can be brought to a close by a process of synthetic development alone. The author mentions three typical forms of the constructive movement: the extension of formulas or expansion of principles, the process of central adjustment, and transition by displacement or substitution. Developmental synthesis must satisfy the demand for conclusions in accord with the results of advancing knowledge, and it must meet the need for principles fitted to serve as the foundation and the vehicle of a vigorous life.

Professor Armstrong's book is an able, suggestive and interesting piece of work that will be helpful to the student and teacher of philosophy in many ways. The historian of philosophy is constantly struck with the similarity between the different negative periods of thought, and ready to see in our own age many characteristic features of decline. One is tempted to accept the general conclusions of Professor Armstrong because they seem so easy to draw, and they are probably correct. It is necessary, however, in my opinion, to make a somewhat closer first-hand study of many of the periods in question before we can dogmatically assert the truth of all the positions advanced. I am not quite sure, for example, that the Sophistic movement was as thorough in its sceptical

temper and in its destructive results as Professor Armstrong conceives it to have been. The Sophists certainly did repudiate the old metaphysics and doubt the possibility of metaphysics, but they seemed to be impelled by a strong desire to study facts; how else shall we explain the eagerness with which they investigated problems ranging all the way from the government of a state to the art of cooking? Gomperz in his 'Griechische Denker' gives us a picture of the period called Sophistic which does not quite fit the description of it as thoroughly sceptical, and makes one feel just a little doubtful of the traditional conceptions of that age. We are also apt to forget, in contrasting different eras of this kind, that, after all, all periods are more or less transitional, that they are all more or less progressive, that the spirit of reflection and criticism is never absolutely stifled. This thought is brought home to closer students of mediæval philosophy. We are so apt to believe that the Middle Ages were scholastic through and through, and that the spirit of criticism and opposition suddenly broke forth, whereas we can hear the mutterings of dissent almost from the very beginning. Think of the philosophical, theological and political heresies, think of the pantheists, the mystics, the nominalists, the sceptics, the thinkers interested in the study of nature, of the early Middle Ages, and you will see that the Renaissance and Reformation did not suddenly drop down from the skies. Of course, it must be confessed that the elements of opposition were embryonic at first, and that they had to struggle for the mastery, but they were there none the less. It must also be noted that the eighteenth century is not essentially an expression of the spirit that denies, but dogmatic, rationalistic, optimistic and cocksure. The Leibnizo-Wolffian philosophy, the common-sense thinkers, the 'Populärphilosophie,' with their cocksure proofs of the existence of God, and their dogmatic metaphysics, do not seem to me to fit in very well with an age of negation and decay, and yet they belong to the eighteenth century as well as the materialists, who, by the way, are equally cocksure.

But whatever doubts one may have with respect to certain theories advanced in Professor Armstrong's book, one can not help but regard it as a thoughtful and stimulating contribution to philosophy.

FRANK THILLY

UNIVERSITY OF MISSOURI.

The Finite in Spinoza. E. RITCHIE. *Philosophical Review,* January, 1904, pp. 16–29.

Hegel claims that Spinoza's system is an 'Acosmism' as it maintains the exclusive reality of God so strenuously as to relegate the phenomenal world to the illusory and unreal. Of course Spinoza asserts the entire dependence of the mode and its relativity to substance, hence the reality of things of experience can only be retained by regarding them as independent of substance. But if substance or God is equivalent to existence, by the very dogma of the relativity of mode is asserted the reality of the individual and of the world made up of individuals. A fuller account of the relation between the particular and the universal

in existence is to be found in some rather obscure elements in Spinoza's system of thought. His use of the scholastic expressions 'natura naturans' and 'natura naturata' shows that he accepts no duality between the real and the phenomenal, for to make these two natures numerically distinct would be to upset his fundamental dogma that God, nature, the 'ens absolute infinitum' is one. To conceive of God as inactive is impossible, it might seem then that we must regard 'natura naturata' as a merely illusory and deceptive presentation of reality—giving us an *apparently* passive universe, which does not in fact exist. But nature, taken as the totality of manifestations and as the effect of which God ('natura naturans') is the cause, is not something apart from God, something undivine, unreal; it is the same being presented as the *resultant* of its own force. The results are real, not illusory; an activity without real results would itself be non-real. The same fact is regarded in new connections, just as 'force' and 'matter' are not separable 'things,' but two ways of envisaging the physical universe. In the earliest formulation of Spinoza's philosophy we have the distinct assertion of things produced immediately by God as identical with infinite modes. In the 'Tractatus de intellectus emendatione' are these same 'creatures immediately produced by God' under the names 'fixed and eternal things,' 'physical things' or 'real entities,' yet these are not the innumerable mutable things, since the last only give us what are external or unessential properties. The language as to these 'singular things' which are yet 'like universals to us' is obscure. There is no correlation here with the Platonic ideas; Spinoza undoubtedly has in view the double manifestation of reality as existence moving in space and the same existence conditioned by mental activity. Epistemologically we must know physical things, objects moving in space, before we know them as reflections in consciousness. A schematic tabulation of Spinoza's exposition of God's being in relation to the physical world shows that the physical universe as a whole, 'facies totius universi,' is the totality of matter as subject to the laws of motion. It is, *as a whole,* permanent and infinite, but is made up of an infinite number of finite and mutable facts. Doctor Ritchie concludes that the dualism which differentiates between an Absolute, as an intrinsic and independent reality, and a phenomenal world of manifold appearance having no intrinsic reality is wholly foreign and adverse to Spinoza's ontology.

I. Woodbridge Riley.

University of New Brunswick.

JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. May, 1904. Vol. XIII., No. 3. *On Mechanical Explanation (pp. 265–283):* E. H. Singer, Jr.– A science should be classified according to its 'dimensions.' The dimensions of mechanics are mass, length and time. Any science whose dimensions can be reduced to these or functions of these (*e. g.,* me-

chanical theory of heat which reduces temperature to velocity of mass-motion) is a mechanical science. In biology where, if anywhere, mechanical explanation would seem to fail, the weight of opinion regards non-mechanical explanation as either temporary or in the nature of an economic device. *Purpose as Logical Category (pp. 284–297):* J. E. CREIGHTON. – Pragmatism or the instrumental theory of knowledge misapprehends the position of the objective theory. The latter does not any more than pragmatism itself hold to a reality beyond all experience. The objective reality postulated by knowledge is none the less objective because it is immanently present in experience. Moreover, it is very doubtful if thought can be regarded even from the biological point of view as having its sole function in the satisfaction of practical needs of the organism. "A series of individual purposes, as a description of objective reality is surely open to all the theoretical objections that have been so often urged against a series of subjective feelings." *The Meaning of the Psychical from the Point of View of the Functional Psychology (pp. 298–319):* H. HEATH BAWDEN. – The psychical and the physical forms of experience differ functionally. Unimpeded process is physical; process under tension is psychical; "Consciousness is to be correlated with nothing less than a complete organic circuit involving the whole context of external nature as truly as the internal mechanism of the nervous system." Both Royce and the panpsychists are criticised for their respective methods of distinguishing physical and psychical. The paper is of very unusual interest. *What is Æsthetics? (pp. 320–327):* G. SANTAYANA. – "Whether æsthetics is a part of psychology or a separate discipline is an insoluble question because it creates a dilemma which does not exist in the facts. A part of psychology deals with æsthetic matters but can not exhaust them; parts of other sciences also deal with the same. *Discussions: Evolutionary Method in Ethical Research (pp. 328–337):* THEODORE T. LAGUNA. – A comprehensive criticism of Professor Dewey's two essays on Evolutionary Method and Morality, and a defense of the method of empiricism from Professor Dewey's attacks. *Reply to Professor Bakewell: C. A. Strong. A Rejoinder (pp. 337–346):* C. M. BAKEWELL. – The discussion is mainly concerning Mr. Strong's view of the relation of the ego to its experience, to other egos, and to the brain. Mr. Strong defends and explains his theory; Mr. Bakewell renews his objections, though in a modified form. *Reviews of Books:* Lester F. Ward, *Pure Sociology:* J. H. TUFTS. G. E. Moore, *Principia Ethica:* E. B. MCGILVARY. M. Kronenberg, *Kant Sein Leben und seine Lehre:* A. E. TAYLOR. Summaries of Articles. Notices of New Books. Notes.

THE BRITISH JOURNAL OF PSYCHOLOGY. January, 1904. Vol. I., Part 1. *Editorial,* J. W. and W. H. R. R. *On the Definition of Psychology (pp. 3–25):* J. WARD. – The psychology of Aristotle, of Descartes, and of 'immediate experience.' Analytic psychology must precede genetic. *On Binocular Flicker and the Correlation of Activity of 'Corresponding' Retinal Points (pp. 26–60):* C. S. SHERRINGTON. – Symmetrical and asymmetrical flicker. The rule of relation of binocular

brightness to component uniocular brightnesses. The binocular sensation is attained by the combination of right and left uniocular sensations elaborated independently. *A Sixteenth Century Psychologist, Bernardino Telesio (pp. 60–77):* J. L. McIntyre. – An empiricistic psychology, the singular completeness and consistency of which accounts for its wide influence on Italian philosophy. *The Sensations excited by a Single Momentary Stimulation of the Eye (pp. 78–113):* W. McDougall. – The primary response is a series of pulses of sensations, diminishing in intensity. The 'recurrent image' is merely the last of such a series of which the intermediate members have been inhibited. More intense sensations are developed more rapidly. *Note on Fechner's 'paradoxical experiment':* W. McDougall. *Proceedings of the Psychological Society.*

REVUE DE PHILOSOPHIE. April, 1904. Pp. 384–518. *La Théorie Physique: son Objet et sa Structure (pp. 387–402):* P. Duhem. – The object of physical science is said to be (1) *explanation* of a group of laws experimentally established or (2) resuming and classifying them without explanation. To explain is to see the real behind the appearance; this real varies according to one's metaphysics and therefore explanation is unsatisfactory (*à suivre*). *Sur le Materialisme Scientifique, II. (pp. 403–425):* P. Vignon. – Materialism advocates chance, not purpose, in organisms. Experimental evidence, morphological and psychological facts show that this doctrine is not sufficient to account for the phenomena of descent (*à suivre*). *Rôle due Hasard dans les Inventions et Découvertes (pp. 426–439):* F. Mentré. – Examination of scientific discoveries ascribed to chance shows chance to mean 'synchronic conjunction of diverging series' (Cournot). It is relative to purpose, not pure or absolute, and yet objective, not subjective. *Revue Critique de Morale (pp. 440–467):* J. Cartier. – Shall ethics be made scientific by becoming a 'social physics' or an affair of pure reason, or a subjective matter? The first can not define the absolute good, but can aid us to improve human life. But it does not exclude, as M. Lévy-Bruhl would claim, the subjective study of morals (*à suivre*). *À propos du Problème Morale (pp. 468–469):* L. Baille. – The conflict between the philosophy of action and the scholastic philosophy has been emphasized; Thomism, however, reduces this conflict to a minimum. *Analyses et Comptes Rendus:* H. Lagrésille, *Le Fonctionnisme Universelle,* D. L. G. *L'Année Philosophique,* L. J. Frappa, *Les Expressions de la Physionomie Humaine,* H. Guyot. Ch. Rappoport, *La Philosophie de l'Histoire,* T. de Visan. V. Brants, *La Petite Industrie Contemporaine,* Hubert-Valleroux. *La Coopération,* G. F. T. Darel, *Le Peuple Roi,* V. Biétrix. Rauh, *L'Expérience Morale,* C. Besse. F. Brunetière, *Cinq Lettres sur Ernest Renan,* V. Biétrix. Periodiques. Bulletin de l'Enseignement Philosophique. Chronique. Nécrologie.

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NOTES AND NEWS

THE editors of the *Psychological Review* announce that Professor Charles H. Judd, of Yale University, is to be hereafter associated with the *Review.* He will be editor of the series of *Monograph Supplements.*

PROFESSOR C. A. ARMSTRONG, of Wesleyan University, delivered two lectures at Columbia University, on May 16 and 17, on 'The Characteristics of the Present Age' and 'The Future Course of Thought.' These were the concluding lectures in the special course which has been given at Columbia during the year.

PROFESSOR CHARLES M. BAKEWELL has been advanced to a full professorship at the University of California. He was formerly associate professor of philosophy.

PROFESSOR ERICH ADICKES, of Münster, has been called to the University of Tübingen and will enter upon his duties there in the fall.

PROFESSOR STANGE, of Königsberg, has been called to the University of Greifswald.

DOCTOR BRUNO BAUCH has been appointed on the editorial staff of the Kantstudien in the place of Doctor Schelers.